AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1.   (currently amended):   A method of restoring phase information on radiation transmitted through an object on the basis of detection data obtained by detecting intensity of the radiation transmitted through the object, said method comprising the steps of:

(a) correcting blur amount for at least one of plural sets of detection data obtained by detecting intensity of radiation on plural detection planes at different distances from the object, said plural sets of detection data representing radiation image information on the plural detection planes, respectively;

(b) obtaining differential data representing difference between a first set of detection data and a second set of detection data of said plural sets of detection data where the blur amount has been corrected for at least one thereof;

(c) obtaining Laplacian of phase on the basis of said differential data and any one of said plural sets of detection data and the set of detection data in which the blur amount has been corrected; and

(d) obtaining phase data of the radiation by performing inverse Laplacian computation on the Laplacian of phase.

2.   (currently amended):   A method according to claim 1, wherein step (a) includes uniforming ~~blue~~ blur amounts caused by a respective focal size of a radiation source ~~in~~ for each of said plural sets of detection data on the basis of respective blur functions of said plural sets of detection data.

3.   (currently amended):   An apparatus for restoring phase information on radiation transmitted through an object on the basis of detection data obtained by detecting intensity of the radiation transmitted through the object, said apparatus comprising:

blur correcting means for correcting blur amount for at least one of plural sets of detection data obtained by detecting intensity of radiation on plural detection planes at different

distances from the object, said plural sets of detection data representing radiation image information on the plural detection planes, respectively;

difference processing means for obtaining differential data representing difference between a first set of detection data and a second set of detection data of said plural sets of detection data where the blur amount has been corrected for at least one thereof;

Laplacian processing means for obtaining Laplacian of phase on the basis of said differential data and any one of said plural sets of detection data and the set of detection data in which the blur amount has been corrected; and

inverse Laplacian processing means for obtaining phase data of the radiation by performing inverse Laplacian computation on the Laplacian of phase.

4. (currently amended): An apparatus according to claim 3, wherein said blur correcting means uniforms ~~blue~~ blur amounts caused by a respective focal size of a radiation source ~~in~~ for each of said plural sets of detection data on the basis of respective blur functions of said plural sets of detection data.

5. (currently amended): A program product containing a computer readable program for restoring phase information on radiation transmitted through an object on the basis of detection data obtained by detecting intensity of the radiation transmitted through the object, said program actuating a CPU to execute the procedure of:

(a) correcting blur amount for at least one of plural sets of detection data obtained by detecting intensity of radiation on plural detection planes at different distances from the object, said plural sets of detection data representing radiation image information on the plural detection planes, respectively;

(b) obtaining differential data representing difference between a first set of detection data and a second set of detection data of said plural sets of detection data where the blur amount has been corrected for at least one thereof;

(c) obtaining Laplacian of phase on the basis of said differential data and any one of said plural sets of detection data and the set of detection data in which the blur amount has been corrected; and

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(d) obtaining phase data of the radiation by performing inverse Laplacian computation on the Laplacian of phase.

6. (currently amended): A program product according to claim 5, wherein procedure (a) includes uniforming ~~blue~~ blur amounts caused by a respective focal size of a radiation source ~~in~~ for each of said plural sets of detection data on the basis of respective blur functions of said plural sets of detection data.